IN THE CLAIMS:

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (New) A marking device for encoding a metallic workpiece with a two-dimensional matrix code, comprising:

a striking tool;

an electromagnetic device for driving the striking tool, with a working movement, to form the two-dimensional matrix code, as plural indentations, in the metallic workpiece;

a return device for generating a force in opposition to the working movement;

a positioning device, displaceable in two dimensions within a plane perpendicular to the direction of the working movement, for positioning the striking tool in a desired encoding position; and

an electronic control unit for controlling the working movement of the striking tool, said electronic control unit setting a first current I_1 for the electromagnetic device during a first, acceleration phase of the working movement and setting a second current I_2, lower than the first current, during a second, moving phase of the working movement, the second, moving phase extending from the first, acceleration phase until impingement of the striking tool on the metallic workpiece.

16. (New) The marking device according to Claim 15, further comprising a time control means for presetting the acceleration time.

17. (New) The marking device according to Claim 15, further comprising position control means for switchover from the acceleration phase to the subsequent moving phase, responsive to a switchover signal S.

18. (New) The marking device according to Claim 17, further comprising a position sensor for controlling switchover in at least one present position (S_0) by generation of switchover signal S.

19. (New) The marking device according to Claim 18, wherein the position detecting

device detects the length of the entire moving distance of the striking tool and/or its distance from the workpiece.

20. (New) The marking device according to Claim 19, further comprising, operatively connected to the position measuring device, means for determining the tolerance-affected distance of the marking head from the workpiece surface in a pre-run before marking and for changing the control parameters in accordance with the determined tolerance-affected distance.

21. (New) The marking device according to Claim 19 further comprising a height adjusting device, operatively connected to the position detecting device, means for determining the tolerance-affected distance of the marking head from the workpiece surface in a pre-run before marking and for compensating the control parameters, in accordance with the determined tolerance-affected distance, by means of the height adjusting device.

22. (New) The marking device according to Claim 15 wherein the electronic control unit provides open-loop control over the entire distance of the working movement in accordance with position or time.

23. (New) The marking device according to Claim 15 wherein the electronic control unit provides closed -loop control over the entire distance of the working movement in accordance with position or time.

24. (New) The marking device according to Claim 15 further comprising stopping means for switching off the current when the striking tool reaches an impinging position.

25. (New) The marking device according to Claim 24 wherein the stopping means recognizes a rise in current which occurs when the impinging position is reached.

26. (New) The marking device according to Claim 15 further comprising braking means for creating a braking current before a rest position is reached in movement of the striking tool away from the workpiece.

27. (New) The marking device according to Claim 26 wherein the braking means is responsive to detected time and/or position.

28. (New) The marking device according to Claim 15 further comprising a main controller for the marking device and wherein the electronic control unit is a separate module interposed between the main controller and the electromagnetic device.

29. (New) The marking device according to Claim 15 further comprising means for increasing the higher current (I_1) in the acceleration phase during a first working stroke.